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DEFRANK

MAY 2 9 2007

Serial No.: 10/681,801 Attorney Docket No.: 100110177-1

Amendments to the Claims:

The claims below replace all prior versions and listings, of claims in the application:

Listing of Claims:

- (currently amended) A digital camera for capturing an image comprising: 1. an image sensor;
- a capture trigger;
- a capture buffer configured as a first memory location comprising a plurality of buffer locations, each of which is available for storing auxiliary image data frames; and
- a second memory location separate from the capture buffer, the second memory location configured to store image frames, wherein each image frame corresponds to an associated auxiliary image frame;
- a processing system configured to continuously receive and process the auxiliary image frames during auxiliary mode of the digital camera and before the capture trigger is activated, to store the auxiliary frames in the first memory location, to detect activation of the capture trigger and receive a corresponding image frame from the image sensor, to store the corresponding image frame in an available buffer location of the second memory location, to perform image processing on the corresponding image frame, and to designate the available buffer location in which the corresponding image frame is stored as unavailable for image storage until the image processing is complete, and to copy one or more auxiliary image frames and corresponding image frames to a fixed section of memory for performing image processing on the copied data.
- 2. (currently amended) The digital camera of claim 1 wherein the processing system further is configured to detect a second activation of the capture trigger and receive a second corresponding image frame from the image sensor, to store the second corresponding image frame in a second available buffer location, to perform image processing on the second corresponding image frame, and to designate the

second available buffer location as unavailable for image storage until the image processing is complete the second memory location is a fixed section of memory configured to be used for image processing and automatic functions.

- (currently amended) The digital camera of claim 1 wherein the processing 3. system is configured to receive auxiliary image frames from the image sensor and to store each auxiliary image frame in another available buffer location image frames are video image frames.
- (original) The digital camera of claim 3 wherein the processing system 4. further is configured to use at least one auxiliary image frame to perform the image processing on the corresponding image frame and to designate at least one another available buffer location in which the at least one auxiliary image frame is stored as unavailable for image storage until the image processing is complete.
- (original) The digital camera of claim 1 wherein the processing system 5. further is configured to compress the corresponding image frame prior to storing the corresponding image frame in the available buffer location with at least one compression method selected from a group consisting of A-law compression, µ-law compression, and discard mode compression.
- (original) The digital camera of claim 1 wherein the processing system 6. further is configured to perform the image processing according to an image processing timing mode selected from at least one member of a group consisting of: performing the image processing immediately after storing the corresponding image frame in the available buffer location, performing the image processing after all buffer locations in the capture buffer are unavailable, performing the image processing after all buffer locations in the capture buffer are unavailable and until at least one unavailable buffer location becomes available, and performing the image processing after all buffer locations in the capture buffer are unavailable and until all buffer locations become available.

7. (currently amended) A method for capturing an image in a digital camera, the digital camera comprising an image sensor, a capture trigger, a capture buffer comprising a plurality of buffer locations each of which is available for storing image data, and a processing system, the method comprising:

using a capture buffer configured as a first memory location having a plurality of buffer locations, each of which is available for storing auxiliary image frames;

using a second memory location separate from the capture buffer, the second memory location configured to store image frames, wherein each image frame corresponds to an associated auxiliary image frame;

continuously receiving and processing the auxiliary image frames during auxiliary mode of the digital camera and before a capture trigger is activated;

storing the auxiliary frames in the first memory location;

detecting activation of the capture trigger and receiving a corresponding image frame at the <u>a</u> processing system from the image sensor;

storing the corresponding image frame in an available buffer location of the second memory location;

performing image processing on the corresponding image frame; and designating the available buffer location in which the corresponding image frame is stored as unavailable for image storage until the image processing is complete; and

copying one or more auxiliary image frames and corresponding image frames to a fixed section of memory for performing image processing on the copied data.

- 8. (original) The method of claim 7 further comprising:
- detecting a second activation of the capture trigger and receiving a second corresponding image frame at the processing system from the image sensor;
- storing the second corresponding image frame in a second available buffer location;

performing image processing on the second corresponding image frame; and

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designating the second available buffer location in which the second corresponding image frame is stored as unavailable for image storage until the second image processing is complete

using a fixed section of memory as the second memory location configured to be used for image processing and automatic functions.

- 9. (currently amended) The method of claim 7 further comprising receiving a plurality of auxiliary image frames from the image sensor and storing each auxiliary image frame in another available buffer location capturing video image frames as the image frames.
 - 10. (currently amended) The method of claim 9 further comprising:
 - detecting a plurality of second activations of the capture trigger and receiving a plurality of second corresponding image frames at the processing system from the image sensor;
 - storing each of the plurality of second corresponding image frames in second available buffer locations;
 - performing image processing on the second plurality of corresponding image frames; and
 - designating each of the second available buffer locations in which the second plurality of corresponding image frames are stored as unavailable for image storage until the image processing is complete for that second corresponding image frame.
- 11. (original) The method of claim 10 further comprising receiving at least one of the auxiliary image frames before receiving at least one of the second plurality of corresponding image frames.
- 12. (original) The method of claim 9 further comprising using at least one auxiliary image frame to perform the image processing on the corresponding image frame and designating the at least another available buffer location in which the at least

one auxiliary image frame is stored as unavailable for image storage until image processing is complete.

- 13. (original) The method of claim 9 further comprising compressing the plurality of auxiliary image frames prior to storing the plurality of auxiliary image frames in the another available buffer locations with at least one compression method selected from a group consisting of A-law compression, µ-law compression, and discard mode compression.
- 14. (original) The method of claim 7 further comprising compressing the corresponding image frame prior to storing the corresponding image frame in the available buffer location with at least one compression method selected from a group consisting of A-law compression, μ-law compression, and discard mode compression.
- 15. (original) The method of claim 7 further comprising performing the image processing according to an image processing timing mode selected from at least one member of a group consisting of: performing the image processing immediately after storing the corresponding image frame in the available buffer location, performing the image processing after all buffer locations in the capture buffer are unavailable, performing the image processing after all buffer locations in the capture buffer are unavailable and until at least one unavailable buffer location becomes available, and performing the image processing after all buffer locations in the capture buffer are unavailable and until all buffer locations become available.
- 16. (currently amended) A method for capturing an image in a digital camera, the digital camera comprising an image sensor, a capture trigger, a capture buffer comprising a plurality of buffer locations each of which is available for storing image data, and a processing system, the method comprising:
 - using a capture buffer configured as a first memory location having a plurality of buffer locations, each of which is available for storing auxiliary image frames;

- using a second memory location separate from the capture buffer, the second memory location configured to store image frames, wherein each image frame corresponds to an associated auxiliary image frame;
- continuously receiving and processing the auxiliary image frames during auxiliary mode of the digital camera and before a capture trigger is activated; storing the auxiliary frames in the first memory location;
- detecting a plurality of activations of the capture trigger and receiving a plurality of corresponding image frames at the processing system from the image sensor:
- storing each corresponding image frame in a corresponding available buffer location of the second memory location;
- performing image processing on each corresponding image frame; and designating each corresponding available buffer location in which each corresponding image frame is stored as unavailable for image storage until the image processing is complete for that corresponding image frame; and

copying one or more auxiliary image frames and corresponding image frames to a fixed section of memory for performing image processing on the copied data.

- 17. (currently amended) The method of claim 16 further comprising receiving auxiliary image frames from the image sensor and storing each auxiliary image frame in another available buffer location using a fixed section of memory as the second memory location configured to be used for image processing and automatic functions.
- 18. (currently amended) The method of claim 17 further comprising receiving at least one of the auxiliary image frames before receiving at least one of the plurality of corresponding image frames capturing video image frames as the image frames.
- 19. (original) The method of claim 17 further comprising using at least one auxiliary image frame to perform the image processing on at least one of the plurality of corresponding image frames and designating at least one another buffer location in

which the at least one auxiliary image frame is stored as unavailable until the image processing is complete on the at least one corresponding image.

(original) The method of claim 16 further comprising compressing the 20. corresponding image frames prior to storing the corresponding image frames in the corresponding available buffer locations with at least one compression method selected from a group consisting of A-law compression, µ-law compression, and discard mode compression.